

## FAILSAFE PROGRAMMING OF IMPLANTABLE MEDICAL DEVICES

### ABSTRACT

A watchdog unit receives stay-alive signals from a programming device during programming of an implantable medical device. The watchdog unit maintains a watchdog timer, and resets the timer upon receipt of each stay-alive signal. If the watchdog timer expires, the watchdog unit changes a mode of operation of the implantable device, e.g., places the implantable medical device into a known, safe state. For example, the watchdog unit may cause the implantable medical device to suspend delivery of therapy, perform a power-on reset, and/or recall a known, safe, therapy delivery program.